

Appl. No. 10/049,452
Amendment dated February 5, 2004
Reply to Office Action of August 6, 2003

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

- 1-28. (previously canceled)
29. (original) A method of inhibiting stress cracking in a thermoplastic shaped article, the method comprising lubricating the interface between the conveyor and the shaped article with a liquid hydrocarbon oil forming a lubricated article.
30. (original) The method of claim 29 wherein the lubricated article is filled with a liquid.
31. (original) The method of claim 29 wherein the hydrocarbon oil comprises a hydrocarbon oil having a viscosity of less than about 50 cSt at 40°C.
32. (original) The method of claim 29 wherein the liquid lubricating oil additionally comprises an additive.
33. (original) The method of claim 29 wherein the thermoplastic comprises a polyester.
34. (original) The method of claim 29 wherein the polyethylene terephthalate container comprises a carbonated beverage container.
35. (original) The method of claim 29 wherein the container comprises a base with at least three lobes and is free of a base cup.

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36. (original) A method of lubricating the interface between a container and a moving conveyor surface, in the substantial absence of foamed lubricant and lubricant runoff, the method comprising:

- (a) forming a continuous thin film of a liquid lubricant composition on a container contact surface of a conveyor; and
- (b) moving a container on the conveyor surface in order to transport the container from a first location to a second location.

37. (original) The method of claim 36 wherein the liquid lubricant comprises an emulsion of an organic phase and an aqueous phase.

38. (original) The method of claim 37 wherein the emulsion contains about 5 to 50 wt% of the aqueous phase.

39. (original) The method of claim 36 wherein the lubricant comprises a suspension of a particulate in a liquid medium.

40. (original) The method of claim 36 wherein the container comprises an aluminum can or a thermoplastic bottle.

41. (original) The method of claim 36 wherein the liquid lubricant is applied to the surface of the conveyor in an amount of about 2×10^{-4} to 0.05 grams of lubricant per each square inch of surface.

42. (original) The method of claim 36 wherein the thickness of the continuous thin film of lubricant comprises a minimum thickness of an amount sufficient to provide minimum lubricating properties up to about 5 millimeters.

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43. (original) The method of claim 40 wherein the thermoplastic bottle comprises a polyethylene terephthalate bottle having a pentaloid base and the area of contact of the lubricant with the bottle is limited to the tips of the pentaloid structure.

44. (original) The method of claim 36 wherein the method is free of any substantial stress placed on the container for the purpose of changing the shape of the container.

45. (original) The method of claim 37 wherein the emulsion is a composition stable to phase separation.

46. (original) The method of claim 37 wherein the emulsion is unstable to phase separation after application of the lubricant to the conveyor surface.

47. (original) The method of claim 36 wherein the coefficient of friction between the container and the conveyor surface is about 0.005 to 0.14.

48. (original) The method of claim 36 wherein the lubricant is applied to the conveyor surface using a spray applicator.

49. (original) The method of claim 36 wherein the container is filled with carbonated beverage and the interior of the container is maintained under substantial pressure.

50. (original) The method of claim 36 wherein the continuous thin film of the lubricant is placed on the surface of the moving conveyor leaving an unlubricated margin on the conveyor edge.

51. (original) The method of claim 50 wherein the width of the lubricated area on the conveyor is about 3 to 150 inches.

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52. (original) The method of claim 51 wherein the unlubricated margins comprise greater than about 0.5 inches.

53. (original) The method of claim 36 wherein the conveyor receives about 50 to about 4000 containers per minute.

54. (original) The method of claim 43 wherein contact with the polyester container is limited to no more than 2 millimeters of height from the conveyor surface in contact with the pentaloid lobes in the substantial absence of contact between the lubricant and the body of the container above the lobe area.

55. (original) The method of claim 36 wherein the lubricant composition is formed into a thin film undiluted or up to a 5:1 dilution of the water with the lubricant.

56. (original) The method of claim 36 wherein the lubricant composition is formed into a thin film in the absence of an inline dilution of the lubricant.

57. (original) The method of claim 36 wherein the first location is a filling station and the second location is a labeling station.

58. (original) The method of claim 43 wherein the area of the bottle in contact with the lubricant comprises about 10 to 250mm².

59. (original) The method of claim 36 wherein the thickness of the continuous thin film of lubricant comprises a minimum thickness of an amount sufficient to provide minimum lubricating properties about 0.0001 to 2 millimeters.

60. (original) The process according to claim 36, additionally comprising cleaning said conveyor with a cleaning solution to remove the lubricant.

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61. (original) The process of claim 36 wherein the amounts of lubricant run off comprises less than about 1 gram per minute per lineal foot of conveyor.

62-74. (canceled)

75-126. (previously canceled)